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PU020030

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REMARKS

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In the Final Office Action, the Examiner stated that claims 1-24 are pending in the application and that claims 1-2, 6-14 and 18-24 stand rejected. The Examiner further stated that claims 3-5 and 15-17 are objected to. No claims are amended by this response.

In view of the following discussion, the Applicant respectfully submits that none of these claims now pending in the application are anticipated under the provisions of 35 U.S.C. § 102 or rendered obvious under the provisions of 35 U.S.C. § 103. Thus the Applicant believes that all of these claims are now in allowable form.

Rejections

A.   35 U.S.C. § 102

The Examiner rejected the Applicant's claims 1-2, 6, 11-14, 18, 23 and 24 under 35 U.S.C. § 102(e) as being anticipated by Suito et al. (US Patent No. 6,925,340, hereinafter "Suito"). The rejection is respectfully traversed.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrik Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)). (emphasis added). The Applicant respectfully submits that Suito fails to teach each and every element of at least the Applicant's claim 1, which specifically recites:

> "A method for playing an audio track during video trick mode playback of a video presentation, the method comprising:
> reading digital data from a storage medium, said digital data representing audio programming corresponding to the video presentation;
> decoding a plurality of digital audio samples corresponding to a selected portion of the video presentation from a portion of said read digital data;
> repeating or dropping selected ones of said digital audio samples at a rate corresponding to a selected trick mode video playback speed of said video presentation;
> transforming said digital audio samples from time domain to corresponding frequency domain audio samples; and
> scaling a playback audio frequency of said frequency domain audio samples in accordance with said trick mode playback."

-2-

With respect to at least claim 1, the Applicant's invention is directed at least in part to a method for playing an audio track during video trick mode playback of a video presentation including repeating or dropping selected ones of the **digital audio samples** at a rate corresponding to a selected trick mode video playback speed of the video presentation, transforming the decoded audio samples from a time domain to a corresponding frequency domain and scaling a playback audio frequency of the frequency domain audio samples in accordance with the trick mode playback.

In the Final Office Action, the Examiner alleges that Suito discloses "repeating or dropping selected ones of said digital audio samples at a rate corresponding to a selected trick mode video playback speed of said video presentation" because Suito discloses that for each processing unit period, sound absence portion(s) of the reproduced sound signal are deleted or partially deleted within a range corresponding to a normal speed reproduction. The Applicant respectfully disagrees.

That is, in contrast to the invention of the Applicant, Suito is directed to a sound reproduction method and sound reproduction apparatus. In Suito, the method delimits a sound signal reproduced at a recording medium at a speed higher than a normal speed into successive processing unit periods. For each processing unit period, sound absence portion(s) of the reproduced sound signal are deleted (or partially deleted) within a range corresponding to a normal speed reproduction. Sound presence portions preceding and following the deleted absence portions are joined or compressed to produce a recognizable sound signal.

More specifically, the Applicant respectfully submits that the teachings of Suito for deleting sound absence portion(s) of the reproduced sound signal absolutely fall far short of the teachings and claims of the Applicant's invention for "repeating or dropping selected ones of said digital audio samples at a rate corresponding to a selected trick mode video playback speed of said video · presentation" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1. That is, the Applicant specifically claims in at least claim 1 repeating or dropping selected digital audio samples and specifically at a rate corresponding to a selected trick mode playback speed. Suito, in contrast,

-3 -

**PATENT
PU020030**

teaches deleting portions of a signal which do not contain audio samples but instead contain the absence of sound or audio samples. In addition, the Applicant specifically teaches and claims in at least claim 1 that the samples are repeated or dropped at a rate corresponding to a selected trick mode video playback speed of the video presentation. In direct contrast to the invention of the Applicant, Suito teaches that sound absence portion(s) of the reproduced sound signal are deleted within a range corresponding to a **normal speed** reproduction. As such, it is very clear that the teachings of Suito for deleting portions of a signal which do not contain audio samples but instead contain the absence of sound or audio samples and deleting the sound absence within a range corresponding to a **normal speed** reproduction absolutely fail to teach, suggest or anticipate at least the Applicant's claim 1, which specifically recites "repeating or dropping selected ones of said digital audio samples at a rate corresponding to a selected trick mode video playback speed of said video presentation".

Even further, the Applicant submits that there is absolutely no teaching, suggestion or disclosure in Suito for "scaling a playback audio frequency of said frequency domain audio samples in accordance with said trick mode playback" as taught in the Applicant's Specification and claimed in at least the Applicant's claim 1. More specifically, the Applicant teaches that in one embodiment, the DSP of the Applicant's invention can configure a frequency scaling element to scale the frequency of the frequency domain audio signal by a factor corresponding to a trick mode video playback speed. In the Final Office Action, the Examiner alleges that because Suito teaches that the amplitude of data signals are suppressed and that video data and sound data is compressed in accordance with a compression coding method and a multiplexing method of the MPEG-2 standard, which the Examiner alleges means that samples are transformed from the time domain to the frequency domain, that this anticipates "scaling a playback audio frequency of said frequency domain audio samples in accordance with said trick mode playback" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1. The Applicant respectfully disagrees.

More specifically, the Applicant in support of claim 1 specifically recites:

- 4 -

"In step 335, DSP 186 can configure frequency scaling element 186b
to scale the frequency of the frequency domain audio signal by a factor $1/n$."
(See Specification, page 8, lines 10-11).

As clearly evident from at least the portion of the Applicant's Specification
presented above, in one embodiment of the invention of the Applicant as claimed
by claim 1, a frequency scaling element scales the frequency of the frequency
domain audio signal.

In contrast to the invention of the Applicant, Suito only teaches a frequency
characteristic correction filter which mixes the output of a component separation
filter and an amplitude suppression section to time the signals to ensure the proper
mixture of the signals. The Applicant respectfully submits that such teachings
absolutely fail to teach, suggest or anticipate at least "scaling a playback audio
frequency of said frequency domain audio samples in accordance with said trick
mode playback" as taught in the Applicant's Specification and claimed by at least
the Applicant's claim 1. Furthermore, the Applicant submits that the teachings of
Suito that the amplitude of data signals are suppressed and that video data and
sound data is compressed in accordance with a compression coding method and a
multiplexing method of the MPEG-2 standard as described by the Examiner, also
absolutely fails to teach, suggest or anticipate "scaling a playback audio frequency
of said frequency domain audio samples in accordance with said trick mode
playback" as taught in the Applicant's Specification and claimed by at least the
Applicant's claim 1.

For at least the reasons recited above, the Applicant respectfully submits
that Suito fails to teach, suggest or disclose at least each and every element of the
Applicant's claimed invention, arranged as in at least the Applicant's claim 1 as
required for anticipation. Therefore, the Applicant respectfully submits that the
teachings and disclosure of Suito do not anticipate the Applicant's invention, at
least with respect to independent claim 1.

Therefore, the Applicant submits that for at least the reasons recited above,
independent claim 1 is not anticipated by the teachings of Suito and, as such, fully
satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Likewise, independent claim 13 recites similar relevant features as recited in
the Applicant's independent claim 1. As described above, there is absolutely no

-5-

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PATENT
PU020030

teaching, suggestion or disclosure in Suito for at least "repeating or dropping selected ones of said digital audio samples at a rate corresponding to a selected trick mode video playback speed of said video presentation" or "scaling a playback audio frequency of said frequency domain audio samples in accordance with said trick mode playback" as claimed by the Applicant's independent claims 1 and 13. As such, the Applicant respectfully submits that for at least the reasons recited above independent claim 13 is also not anticipated by the teachings of Suito and also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claims 2, 6, 11-12, 14, 18, 23 and 24 depend either directly or indirectly from independent claims 1 and 13 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 2, 6, 11-12, 14, 18, 23 and 24 are also not anticipated by the teachings of Suito. Therefore the Applicant submits that dependent claims 2, 6, 11-12, 14, 18, 23 and 24 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

B. 35 U.S.C. § 103

The Examiner rejected the Applicant's claims 7-10 and 19-22 as being unpatentable over Suito as applied to claims 1 and 13 above, and further in view of Shimura (US Patent No. 6,658,197). The rejection is respectfully traversed.

The Examiner applied the Suito for teaching all of the aspects of the Applicant's claims 1 and 13 but concedes that the Suito fails to teach repeating selected ones of the audio samples at a rate inversely proportional to a selected trick mode video playback speed of said video presentation to produce a trick mode set of audio samples, and generating an audio playback signal corresponding to said trick mode set of said audio samples. However, the Examiner cites Shimura for teaching repeating selected ones of the audio samples at a rate inversely proportional to a selected trick mode video playback speed of said video presentation to produce a trick mode set of audio samples, and

- 6 -

generating an audio playback signal corresponding to said trick mode set of said audio samples. The Applicant respectfully disagrees.

Claims 7-10 and 19-22 are dependent claims that depend either directly or indirectly from independent claims 1 and 13. As described above, the Applicant submits that the teachings of Suito fail to teach, suggest or anticipate the Applicant's claims 1 and 13 for at least the reasons recited above. As such and at least because the teachings of Suito fail to teach, suggest or anticipate the Applicant's claims 1 and 13 for at least the reasons recited above, the Applicant further submits that the teachings of Suito fail to teach, suggest or render obvious the Applicant's claims 7-10 and 19-22 which depend directly or indirectly from the Applicant's claims 1 and 13, respectively.

Furthermore, the Applicant submits that the teachings of Shimura fail to bridge the substantial gap between the teachings of Suito and the invention of the Applicant. More specifically, the Applicant submits that the teachings of Shimura for an audio signal reproduction apparatus and for reproducing a digital audio signal recorded on a recording medium by a predetermined number of samples, at a recording medium travel speed different from the travel speed during the recording fail to teach, suggest or make obvious a method and apparatus playing an audio track during video trick mode playback of a video presentation including at least "repeating or dropping selected ones of said digital audio samples at a rate corresponding to a selected trick mode video playback speed of said video presentation" or "transforming said digital audio samples from time domain to corresponding frequency domain audio samples" or "scaling a playback audio frequency of said frequency domain audio samples in accordance with said trick mode playback" as claimed by the Applicant's independent claims 1 and 13.

That is, in Shimura the pitch control of a reproduced digital audio signal is performed such that when the reproduction speed of the recording medium is lower than the travel speed during the recording, in response to the reproduction speed, pitch is automatically controlled to a fixed or variable pitch. Furthermore, in Shimura even if the reproduction is at a lowered speed, it is possible to recognize the contents of conversation or melody of a music source as well as to distinguish from noise such that the reproduction sound clearness is enhanced.

- 7 -

PATENT
PU020030

The invention of Shimura includes a reproduction means for reproducing from the recording medium the digital audio signal based on the predetermined number of samples; a pitch control means for performing pitch control of the digital audio signal reproduced; a speed detection means for detecting a reproduction speed of the recording medium from elements of a travel mechanism of the recording means; and a pitch decision means responding to the output of the speed detection means, and in a case if the reproduction speed of the recording medium is lower than the travel speed of the recording, so that the pitch control means decides a pitch variable period and a pitch fixed interval. However, there is absolutely no teaching, suggestion or disclosure in Shimura for at least "a control processor for repeating or dropping selected ones of said digital audio samples at a rate corresponding to a selected trick mode video playback speed of said video presentation" and "a digital signal processor (DSP) comprising a fast Fourier transform (FFT) processing element for transforming said digital audio samples from time domain to corresponding frequency domain audio samples" where "said digital signal processor comprising a scaling element for scaling a playback audio frequency of said frequency domain audio samples in accordance with said trick mode playback" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 1 and 13.

Therefore, the Applicant submits that for at least the reasons recited above, independent claims 1 and 13 are not rendered obvious by the teachings of Suito and Shimura, alone or in any allowable combination, and, as such, fully satisfy the requirements of 35 U.S.C. § 103 and are patentable thereunder. As such and at least because the teachings of Suito and Shimura fail to teach, suggest or render obvious the Applicant's claims 1 and 13 for at least the reasons recited above, the Applicant further submits that the teachings of Suito and Shimura, alone or in any allowable combination, also fail to teach, suggest or render obvious the Applicant's claims 7-10 and 19-22 which depend directly or indirectly from the Applicant's claims 1 and 13, respectively, and, as such, claims 7-10 and 19-22 fully satisfy the requirements of 35 U.S.C. § 103 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

- 8 -

Conclusion

The Applicant would like to thank the Examiner for pointing out allowable subject matter, however, the Applicant respectfully submits that all of the Applicant's claims are now in allowable form.

Thus the Applicant submits that none of the claims, presently in the application, are anticipated under the provision of 35 U.S.C. § 102 or rendered obvious under the provisions of 35 U.S.C. § 103. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,

Ronald L. Blair
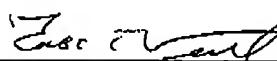
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-9-